



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R09-OAR-2015-0432; FRL-9953-66-Region 9]**

**Denial of Request for Extension of Attainment Date for 1997 PM<sub>2.5</sub> NAAQS; California;**

**San Joaquin Valley Serious Nonattainment Area**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is denying a request submitted by California for extension of the attainment date for the 1997 24-hour and annual fine particulate matter (PM<sub>2.5</sub>) national ambient air quality standards in the San Joaquin Valley Serious PM<sub>2.5</sub> nonattainment area.

**DATES:** This rule is effective on **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** The EPA has established docket number EPA-R09-OAR-2015-0432 for this action. Generally, documents in the docket for this action are available electronically at <http://www.regulations.gov> or in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California 94105-3901. While all documents in the docket are listed at <http://www.regulations.gov>, some information may be publicly available only at the hard copy location (e.g., copyrighted material, large maps, multi-volume reports), and some may not be available in either location (e.g., confidential business information (CBI)). To inspect the hard

copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

**FOR FURTHER INFORMATION CONTACT:** Rory Mays, Air Planning Office (AIR-2), EPA Region 9, (415) 972-3227, mays.rory@epa.gov.

**SUPPLEMENTARY INFORMATION:** Throughout this document, “we,” “us” and “our” refer to the EPA.

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## **I. Background**

On February 9, 2016, the EPA proposed to approve, conditionally approve, and disapprove state implementation plan (SIP) revisions submitted by California (the “State” or California Air Resources Board (CARB)) to address Clean Air Act (CAA or “Act”) requirements for the 1997 24-hour and annual PM<sub>2.5</sub> national ambient air quality standards (NAAQS) in the San Joaquin Valley (SJV) Serious PM<sub>2.5</sub> nonattainment area.<sup>1</sup> The SIP revisions on which we proposed action are the “2015 Plan for the 1997 PM<sub>2.5</sub> Standard,” which the State submitted on June 25, 2015, and the “2018 Transportation Conformity Budgets for the San Joaquin Valley PM<sub>2.5</sub> SIP, Plan Supplement,” submitted on August 13, 2015. We refer to these SIP submissions collectively as the “2015 PM<sub>2.5</sub> Plan” or “the Plan.” The 2015 PM<sub>2.5</sub> Plan is a PM<sub>2.5</sub> Serious area

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<sup>1</sup> 81 FR 6936 (February 9, 2016).

attainment plan for the SJV and includes a request to extend the applicable attainment date for the 24-hour and annual PM<sub>2.5</sub> standards by three and five years, respectively, on the basis that attainment by December 31, 2015 is impracticable, in accordance with CAA section 188(e).

The EPA proposed to approve the following elements of the Plan as satisfying applicable CAA requirements: (1) the 2012 base year emissions inventories; (2) the best available control measures (BACM)/best available control technology demonstration; (3) the attainment demonstration; (4) the reasonable further progress demonstration; (5) the State's application for an extension of the Serious area attainment date to December 31, 2018 for the 1997 24-hour PM<sub>2.5</sub> NAAQS and to December 31, 2020 for the 1997 annual PM<sub>2.5</sub> NAAQS; (6) the San Joaquin Valley Unified Air Pollution Control District (the "District" or SJVUAPCD) commitment to amend and implement revisions to SJVUAPCD Rule 4692 ("Commercial Charbroiling") for under-fired charbroilers on a specific schedule; and (7) the motor vehicle emissions budgets for 2014, 2017, 2018, and 2020. Additionally, the EPA proposed to approve the Plan's inter-pollutant trading mechanism for use in transportation conformity analyses, with the condition that trades are limited to substituting excess reductions in emissions of nitrogen oxides (NO<sub>x</sub>) for direct PM<sub>2.5</sub> emission reductions.

The EPA proposed to conditionally approve the Plan's quantitative milestones based on a commitment by the State to adopt specific enforceable measures by a date certain but not later than one year after the date of the Plan approval, consistent with CAA section 110(k)(4). Finally, the EPA proposed to disapprove the Plan's contingency measures for failure to satisfy the requirements of CAA section 172(c)(9).

Section 188(e) of the CAA provides the Administrator with discretionary authority to grant a state's request for an extension of a Serious area attainment date where certain conditions

are met. Before the EPA may extend the attainment date for a Serious area under section 188(e), the State must: (1) apply for an extension of the attainment date beyond the statutory attainment date; (2) demonstrate that attainment by the statutory attainment date is impracticable; (3) have complied with all requirements and commitments pertaining to the area in the implementation plan; (4) demonstrate to the satisfaction of the Administrator that the plan for the area includes the “most stringent measures” that are included in the implementation plan of any state or are achieved in practice in any state, and can feasibly be implemented in the area; and (5) submit a demonstration of attainment by the most expeditious alternative date practicable.<sup>2</sup> The EPA’s determination of whether such a plan provides for attainment by the most expeditious date practicable depends on whether the plan provides for implementation of BACM no later than the statutory implementation deadline, the most stringent measures (MSM) as expeditiously as practicable, and any other technologically and economically feasible measures that will result in attainment as expeditiously as practicable.

Given the strategy in the nonattainment provisions of the Act to offset longer attainment time frames with more stringent control requirements, the EPA interprets the MSM provision to assure that additional controls that can feasibly be implemented in the area beyond the set of measures adopted as BACM are implemented. Two ways to do this are (1) to require that more sources and source categories be subject to MSM analysis than to BACM analysis and controlled as necessary – *i.e.*, by expanding the applicability provisions in the MSM control requirements to cover more sources, and (2) to require reanalysis of any measures adopted in other areas that were rejected during the BACM analysis because they could not be implemented by the BACM

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<sup>2</sup> *Id.* at 6940.

implementation deadline to see if they are now feasible for the area given the longer attainment timeframe.<sup>3</sup>

The EPA provided a 30-day period for public comment on the proposed rule and received comment letters from Mr. Paul Cort, on behalf of Earthjustice, and from Mr. Shawn Dolan. The comments from Earthjustice primarily argued that the control measure analysis in the Plan for several sources categories, including ammonia emission sources, glass melting furnaces, and internal combustion engines used in agricultural operations, fail to satisfy CAA requirements. The comments from Mr. Shawn Dolan argued that EPA Method 9 should be phased out in favor of other methods for evaluating visible emissions such as the Digital Camera Opacity Technique (DCOT).

## **II. Final Action on Section 188(e) Extension Request**

Based on our reevaluation of the 2015 PM<sub>2.5</sub> Plan and related control measures and consideration of the comments we received, the EPA is denying CARB's request for extension of the December 31, 2015 Serious area attainment date for the 1997 PM<sub>2.5</sub> NAAQS in the SJV. As explained in our proposed rule, one of the minimum criteria for extension of an attainment date under CAA section 188(e) is that the state demonstrate to the satisfaction of the Administrator that the plan for the area includes the most stringent measures that are included in the implementation plan of any state or are achieved in practice in any state, and can feasibly be implemented in the area. For a number of source categories, CARB and the SJVUAPCD have demonstrated that the SIP includes the most stringent measures required or achieved in practice in other areas. For the following reasons, however, we find that CARB and the SJVUAPCD have

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<sup>3</sup> *Id.* at 6941.

not demonstrated to the EPA's satisfaction that the plan for the SJV area includes all MSM that can feasibly be implemented in the area.

First, the 2015 PM<sub>2.5</sub> Plan does not adequately demonstrate that it includes MSM for sources of ammonia emissions in the SJV.<sup>4</sup> As explained in our proposed rule, three source categories collectively emitted 95% of all ammonia emissions in the 2012 annual average base year inventory for the SJV area: confined animal facilities (CAFs), composting operations, and fertilizer application.<sup>5</sup> The 2015 PM<sub>2.5</sub> Plan states that three SIP-approved rules designed to limit volatile organic compound (VOC) emissions also control ammonia emissions from two of these source categories (*i.e.*, CAFs and composting operations) but does not substantiate these conclusions. For example, according to the 2015 PM<sub>2.5</sub> Plan, many of the VOC control measures in SJVUAPCD Rule 4570 ("Confined Animal Facilities"), as amended October 21, 2010, have an ammonia "co-benefit," and these measures have reduced ammonia emissions in the SJV by over 100 tons per day (tpd).<sup>6</sup> The 2015 PM<sub>2.5</sub> Plan does not, however, specifically identify any enforceable requirement in SJVUAPCD Rule 4570 that reduces ammonia emissions from CAF operations, nor does it substantiate its calculation of ammonia emission reductions attributed to SJVUAPCD Rule 4570 other than by reference to an outdated analysis from 2006.<sup>7</sup> Moreover, a

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<sup>4</sup> As we explained in our proposed rule, the EPA does not agree at this time with the State's and District's conclusion in the Plan that ammonia emissions do not contribute significantly to PM<sub>2.5</sub> levels exceeding the PM<sub>2.5</sub> standards in the SJV. 81 FR 6936, 6948 (February 9, 2016). Accordingly, consistent with the regulatory presumption under subpart 4 of part D, title I of the Act, ammonia emission sources are subject to control evaluation for purposes of implementing the 1997 PM<sub>2.5</sub> NAAQS in the SJV.

<sup>5</sup> 81 FR 6936, 6978 (February 9, 2016); *see also* 2015 PM<sub>2.5</sub> Plan, Appendix C, p. C-239.

<sup>6</sup> 2015 PM<sub>2.5</sub> Plan, Appendix C, pp. C-239 to C-240.

<sup>7</sup> 2015 PM<sub>2.5</sub> Plan, Appendix C, pp. C-239 to C-275 and SJVUAPCD, "Final Draft Staff Report, Proposed Re-Adoption of Rule 4570 (Confined Animal Facilities)," June 18, 2009, at Appendix F, "Ammonia Reductions Analysis for Proposed Rule 4570 (Confined Animal Facilities)," June 15, 2006 (discussing various assumptions underlying the District's calculation of ammonia emission factors without identifying relevant emissions inventories). We note that CARB has provided the EPA with significantly lower estimates of ammonia emission reductions achieved by SJVUAPCD Rule 4570 based on more recent calculations of reductions from a 2012 baseline emissions inventory. Email dated September 3, 2015, from Gabe Ruiz (CARB) to Larry Biland and Andrew Steckel (EPA), regarding "SJV Livestock Ammonia Emissions with and without Rule 4570."

number of provisions in SJVUAPCD Rule 4570 allow CAF owners/operators to implement “alternative mitigation measures”<sup>8</sup> *in lieu of* the mitigation measures listed in the rule, without any requirement to ensure that such alternative mitigation measures achieve any particular level of ammonia emission reductions.<sup>9</sup> We find these analyses in the 2015 PM<sub>2.5</sub> Plan insufficient to demonstrate that the plan includes MSM for ammonia emissions from CAFs in the SJV. Because emissions from CAFs account for more than half of all ammonia emissions in the SJV,<sup>10</sup> a more robust analysis of potential ammonia emission reduction measures for this source category is necessary to satisfy the MSM requirement.

Similarly, the 2015 PM<sub>2.5</sub> Plan states that SJVUAPCD Rule 4565 (“Biosolids, Animal Manure, and Poultry Litter Operations”), as adopted March 15, 2007, and SJVUAPCD Rule 4566 (“Organic Material Composting Operations”), as adopted August 18, 2011, limit ammonia emissions from composting operations but does not specifically identify any enforceable requirement in either of these rules that reduces ammonia emissions, nor does it identify a basis for the District’s statement that “the [ammonia] control efficiencies are assumed to be the same as the VOC control efficiencies... since the same control measures will reduce both VOC and [ammonia] from these operations.”<sup>11</sup> By contrast, South Coast Air Quality Management District (SCAQMD) Rule 1133.2 (“Emission Reductions from Co-Composting Operations”), as adopted January 10, 2003, and SCAQMD Rule 1133.3 (“Emission Reductions from Greenwaste Composting Operations”), as adopted July 8, 2011, both contain specific requirements to reduce

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<sup>8</sup> “Alternative Mitigation Measure” is defined in SJVUAPCD Rule 4570 as “a mitigation measure that is determined by the APCO, ARB, and EPA to achieve reductions that are equal to or exceed the reductions that would be achieved by other mitigation measures listed in this rule that owners/operators could choose to comply with rule requirements.” SJVUAPCD Rule 4570 (amended October 21, 2010), section 3.4. Because SJVUAPCD Rule 4570 explicitly applies only to VOC emissions, the requirement for equivalent “reductions” in section 3.4 applies only to VOC emission reductions and does not apply to ammonia emission reductions.

<sup>9</sup> See, e.g., SJVUAPCD Rule 4570 (amended October 21, 2010) at section 5.6, Table 4.1.F.

<sup>10</sup> 2015 PM<sub>2.5</sub> Plan, Appendix B, pp. B-17 and B-19.

<sup>11</sup> 2015 PM<sub>2.5</sub> Plan, Appendix C, pp. C-271 to C-278.

ammonia emissions and, in some cases, to achieve an overall ammonia emission reduction of at least 80% by weight from specified baseline levels.<sup>12</sup>

With respect to fertilizer application, the 2015 PM<sub>2.5</sub> Plan discusses ongoing research on improved methods of fertilizer application to maximize nitrogen use efficiency and minimize air and water quality impacts and states that “the weight of evidence suggests that managing nutrient applications to fields ... has significantly reduced losses of nitrogen compounds to the environment, including leaching of nitrogen compounds to groundwater and air emissions such as ammonia and nitrous oxide.”<sup>13</sup> The 2015 PM<sub>2.5</sub> Plan does not, however, provide any specific analysis of potential control measures to reduce ammonia emissions from fertilizer application or identify any enforceable SIP requirement that reduces ammonia emissions from this source category.

In sum, the 2015 PM<sub>2.5</sub> Plan fails to identify any specific, enforceable requirement to reduce ammonia emissions in the SIP for the area and does not demonstrate that the State or District adequately considered potential control measures to expand or strengthen the reasonably available control measure (RACM) strategy for ammonia emission sources.<sup>14</sup> We therefore find the District’s analyses in the 2015 PM<sub>2.5</sub> Plan insufficient to demonstrate that the plan includes MSM for ammonia emission sources in the SJV.

Second, the 2015 PM<sub>2.5</sub> Plan does not adequately demonstrate that it includes MSM for NO<sub>x</sub> emissions from internal combustion engines used in agricultural operations in the SJV.

SJVUAPCD Rule 4702, as amended November 14, 2013, regulates NO<sub>x</sub> emissions from two

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<sup>12</sup> SCAQMD Rule 1133.2 (adopted January 10, 2003), section (d) and SCAQMD Rule 1133.3 (adopted July 8, 2011), section (d).

<sup>13</sup> 2015 PM<sub>2.5</sub> Plan, Appendix C, pp. C-268 to C-271.

<sup>14</sup> The SJVUAPCD’s Moderate area plan for the 2006 PM<sub>2.5</sub> NAAQS, adopted in 2012, relies upon the same SIP-approved VOC control measures to satisfy RACM requirements for these NAAQS. *See* EPA, Final Rule, “Approval and Promulgation of Air Quality State Implementation Plans; California; San Joaquin Valley; Moderate Area Plan for the 2006 PM<sub>2.5</sub> NAAQS,” August 16, 2016 (pre-publication notice).



types of agricultural internal combustion (IC) engines rated at 25 brake horsepower (bhp) or greater: spark-ignited (SI) engines and compression-ignited (CI) engines.<sup>15</sup> For SI engines used in agricultural operations, the rule establishes NO<sub>x</sub> emission limits of 90 parts per million by volume (ppmv) for rich-burn engines and 150 ppmv for lean-burn engines.<sup>16</sup> For CI engines used in agricultural operations, Rule 4702 requires compliance by specified dates with EPA Tier 3 or Tier 4 NO<sub>x</sub> emission standards for non-road CI engines in 40 CFR part 89 or part 1039, as applicable, or an 80 ppmv NO<sub>x</sub> emission limit, depending on engine type.<sup>17</sup>

SCAQMD Rule 1110.2, by contrast, establishes an 11 ppmv NO<sub>x</sub> emission limit for all stationary SI and CI engines rated over 50 bhp, effective July 1, 2011, with limited exceptions for agricultural engines that meet certain conditions.<sup>18</sup> According to the SCAQMD, three natural gas-fired SI engines used in agricultural operations are currently subject to the 11 ppmv NO<sub>x</sub> emission limit in Rule 1110.2 and use nonselective catalytic reduction (NSCR, also called “three-way catalysts”) control technology to comply with this emission limit.<sup>19</sup> The Feather River Air Quality Management District (FRAQMD) Rule 3.22, as amended October 6, 2014, establishes NO<sub>x</sub> emission limits of 25 parts per million (ppm) and 65 ppm for rich-burn and lean-burn agricultural engines in southern FRAQMD, respectively, except for agricultural engines that emit less than 50% of the major source thresholds for regulated air pollutants and/or

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<sup>15</sup> SJVUAPCD Rule 4702 (amended November 14, 2013), sections 2.0 and 5.2.

<sup>16</sup> *Id.* at section 5.2.3 and Table 3.

<sup>17</sup> *Id.* at section 5.2.4 and Table 4 and section 3.37 (defining Tier 1, Tier 2, Tier 3, and Tier 4 engines).

<sup>18</sup> SCAQMD Rule 1110.2 (amended February 1, 2008), section (d)(1) (referencing Tables I and II). Rule 1110.2 provides an exemption from the 11 ppmv emission limit for agricultural engines that meet EPA Tier 4 emission standards and either of two additional conditions: (1) the engine operator submits documentation to the SCAQMD, by the deadline for a permit application, that the applicable electric utility has rejected an application for an electrical line extension to the location of the engines, or (2) the SCAQMD determines that the operator does not qualify for funding under California Health and Safety Code Section 44229 to replace, retrofit or repower the engine. SCAQMD Rule 1110.2 at section (h)(9).

<sup>19</sup> Email dated May 3, 2016, from Kevin Orellana (SCAQMD) to Nicole Law (EPA), regarding “Question on Engines under Rule 1110.2.”

hazardous air pollutants.<sup>20</sup> The NO<sub>x</sub> emission limits for agricultural engines in SCAQMD Rule 1110.2 and FRAQMD Rule 3.22 are significantly more stringent than the 90 ppmv and 150 ppmv limits applicable to agricultural engines in SJVUAPCD Rule 4702. Moreover, SJVUAPCD Rule 4702 itself establishes NO<sub>x</sub> emission limits for IC engines used in other (non-agricultural) operations that range from 11 to 50 ppmv for rich-burn engines and 11 to 75 ppmv for lean-burn engines, depending on type of fuel and use.<sup>21</sup>

In Appendix C of the 2015 PM<sub>2.5</sub> Plan, the SJVUAPCD estimated the following costs of replacing agricultural SI engines: \$76,209 per ton to replace a lean-burn engine to meet an 11 ppmv NO<sub>x</sub> limit; \$42,146 per ton to replace a lean-burn engine to meet a 65 ppmv NO<sub>x</sub> limit; \$59,754 per ton to replace a rich-burn engine to meet an 11 ppmv NO<sub>x</sub> limit; and \$69,521 per ton to replace a rich-burn engine to meet a 25 ppmv NO<sub>x</sub> limit.<sup>22</sup> The District subsequently submitted additional information indicating that the cost of replacing a lean-burn engine to meet 65 ppmv or 25 ppmv NO<sub>x</sub> limits would be the same as the replacement cost to meet an 11 ppmv NO<sub>x</sub> limit (\$76,209 per ton), as selective catalytic reduction (SCR) would be necessary for a lean-burn engine to meet any of these limits, and indicating that the cost of replacing a rich-burn engine to meet a 65 ppmv NO<sub>x</sub> limit would also be the same as the replacement cost to meet 25 ppmv or 11 ppmv NO<sub>x</sub> limits (\$59,754 or \$69,521 per ton), as three-way catalysts (NSCR) would be

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<sup>20</sup> FRAQMD Rule 3.22 (amended October 6, 2014), section D.1, Table 2 (South FRAQMD Emission Limits) and section B.1.e (Exemptions). As of June 2016, staff at the FRAQMD were unaware of any stationary SI engines currently operating at agricultural facilities in the Feather River area that have demonstrated compliance with the 25 ppm or 65 ppm NO<sub>x</sub> emission limits in FRAQMD Rule 3.22. *See* email dated June 2, 2016, from Alamjit Mangat (FRAQMD) to Nicole Law (EPA), regarding “Engines in FRAQMD” (stating that all 423 agricultural engines currently operating in the Feather River area qualify for an exemption from the NO<sub>x</sub> emission limits in FRAQMD Rule 3.22). Nonetheless, because these NO<sub>x</sub> emission limits are approved into the California SIP as part of an earlier version of FRAQMD Rule 3.22 (*see* 77 FR 12493, March 1, 2012), they are required as MSM if they can feasibly be implemented in the SJV.

<sup>21</sup> SJVUAPCD Rule 4702 (amended November 14, 2013), section 5.2.1. Table 1 and section 5.2.2. Table 2.

<sup>22</sup> 2015 PM<sub>2.5</sub> Plan, Appendix C, pp. C-132 to C-139.

necessary for a rich-burn engine to meet any of these limits.<sup>23</sup> The SJVUAPCD did not, however, identify the bases for any of these cost estimates or submit related technical documentation. At the EPA's request, the SJVUAPCD provided additional information about the technological and economic feasibility of IC engine retrofits to meet lower NO<sub>x</sub> limits but similarly did not identify the bases for its cost estimates or provide any related technical documentation.<sup>24</sup> Moreover, according to the SCAQMD, the cost-effectiveness of replacing an agricultural SI engine ranges from \$5,650 to \$29,000 per ton of NO<sub>x</sub> reduced and, for most engine categories, is below \$20,000 per ton.<sup>25</sup>

Given the absence of a technical basis for the SJVUAPCD's cost estimates for engine replacements or retrofits, the contrary information presented by the SCAQMD regarding costs for the same type of engines, and the significantly lower NO<sub>x</sub> emission levels achieved in practice in the South Coast area, as well as the lower NO<sub>x</sub> limits for similar engines required in SIP-approved rules for both the Feather River area and the SJV, we find the District's analyses in the 2015 PM<sub>2.5</sub> Plan insufficient to demonstrate that the plan includes MSM for NO<sub>x</sub> emissions from IC engines used in agricultural operations.

Third, the 2015 PM<sub>2.5</sub> Plan does not adequately demonstrate that it includes MSM for NO<sub>x</sub> emissions from container glass melting furnaces in the SJV. SJVUAPCD Rule 4354, as amended May 19, 2011, establishes a NO<sub>x</sub> emission limit of 1.5 pounds of NO<sub>x</sub> per ton (lbs NO<sub>x</sub>/ton) of glass pulled, over a 30-day rolling average.<sup>26</sup> Under the SCAQMD's Regional Clean Air Incentives Market (RECLAIM) Program, the SCAQMD determined in 2000 that a NO<sub>x</sub> limit

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<sup>23</sup> Email dated April 27, 2016, from Sheraz Gill (SJVUAPCD) to Andrew Steckel (EPA), regarding "Additional SJV info."

<sup>24</sup> Email dated June 25, 2015, from Sheraz Gill (SJVUAPCD) to Andrew Steckel (EPA), regarding "Requested Information."

<sup>25</sup> Email dated May 3, 2016, from Kevin Orellana (SCAQMD) to Nicole Law (EPA), regarding "Question on Engines under Rule 1110.2."

<sup>26</sup> SJVUAPCD Rule 4354 (amended May 19, 2011), section 5.1.

of 1.2 lbs NO<sub>x</sub>/ton of glass pulled represented Best Available Retrofit Control Technology (BARCT)<sup>27</sup> for glass melting furnaces, and in 2015 the SCAQMD determined that a lower NO<sub>x</sub> limit of 0.24 lbs NO<sub>x</sub>/ton of glass pulled represents BARCT for this source category based on use of SCR or the “Ultra Cat ceramic filter system,” which the SCAQMD found is guaranteed to achieve an 80% NO<sub>x</sub> reduction and has been installed or is under construction at 12 glass manufacturing locations worldwide.<sup>28</sup> The Owens-Brockway Glass Container facility, which manufactures clear and colored beer bottles, is the only glass melting facility currently operating in the South Coast area.<sup>29</sup> At the EPA’s request, the SCAQMD provided continuous emission monitoring system (CEMS) data from February 2015 for the Owens-Brockway facility. The CEMS data shows that the facility operated at approximately 90% production capacity and consistently emitted below 0.72 lbs NO<sub>x</sub>/ton of glass pulled during that month, using oxyfuel firing to control NO<sub>x</sub> emissions.<sup>30</sup>

According to the SJVUAPCD, NO<sub>x</sub> emissions from glass melting facilities operating oxyfuel or SCR systems can vary widely depending on multiple factors, including the stability of the glass pull rate and the condition and age of the furnace refractory and insulation.<sup>31</sup> The SJVUAPCD states that glass melting facilities in the SJV manufacture a large variety of sizes

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<sup>27</sup> BARCT is defined as “an emission limitation that is based on the maximum degree of reduction achievable taking into account environmental, energy, and economic impacts by each class or category of source.” California Health & Safety Code Section 40406.

<sup>28</sup> The RECLAIM program requires that container glass melting facilities achieve NO<sub>x</sub> reductions consistent with the 2015 BARCT determination (0.24 lbs NO<sub>x</sub>/ton of glass pulled) by 2022. SCAQMD Rule 2002 (as amended December 4, 2015), subparagraph (f)(1)(L) and Table 6 (“RECLAIM NO<sub>x</sub> 2022 Ending Emission Factors”); *see also* SCAQMD, Draft Final Staff Report, “Proposed Amendments to Regulation XX, Regional Clean Air Incentives Market (RECLAIM), NO<sub>x</sub> RECLAIM,” December 4, 2015, at pp. 170-171.

<sup>29</sup> Email dated May 13, 2016, from Kevin Orellana (SCAQMD) to Idalia Perez (EPA) regarding “question regarding SCAQMD boilers and container glass facility;” *see also* email dated April 28, 2016, from Kevin Orellana (SCAQMD) to Idalia Perez (EPA) regarding “question regarding SCAQMD boilers and container glass facility.”

<sup>30</sup> Email dated April 13, 2016, from Kevin Orellana (SCAQMD) to Idalia Perez (EPA) regarding “question regarding SCAQMD boilers and container glass facility.”

<sup>31</sup> Email dated April 27, 2016, from Sheraz Gill (SJVUAPCD) to Andrew Steckel (EPA) regarding “Additional SJV info.”

and shapes of still and sparkling wine glass bottles and often must respond to fluctuating demands in the wine industry, which require operators to use their furnaces in a manner that results in a less stable pull rate compared to facilities located in the South Coast, which mainly produce beer bottles. Additionally, according to the SJVUAPCD, as furnaces age the refractory is not as effective at retaining heat in the furnace and the burner fire rate must be increased over time to maintain the same overall furnace and glass temperature, which increases NO<sub>x</sub> emissions on a lb/ton basis. The District states that all of these factors result in varied NO<sub>x</sub> emission rates depending on production conditions, furnace age, and furnace design.<sup>32</sup> The District did not, however, submit or reference any technical documentation to support its conclusions about the feasibility of lower NO<sub>x</sub> emission limits for glass melting furnaces in the SJV. Given the absence of a technical basis for the SJVUAPCD's conclusions about the feasibility of more stringent controls for glass melting furnaces, and the available information from the SCAQMD about significantly lower NO<sub>x</sub> emission levels that have been achieved in practice both in the South Coast and elsewhere, we find the District's analyses in the 2015 PM<sub>2.5</sub> Plan insufficient to demonstrate that the plan includes MSM for NO<sub>x</sub> emissions from container glass melting furnaces.

Finally, the 2015 PM<sub>2.5</sub> Plan does not adequately demonstrate that the State and District reevaluated, for potential adoption, control measures rejected during the State's and District's development of the previous attainment plan for the 1997 PM<sub>2.5</sub> NAAQS in the SJV area (the "2008 PM<sub>2.5</sub> Plan")<sup>33</sup> in accordance with the EPA's longstanding interpretation of the MSM requirement. As explained in our proposed rule, given the strategy in the nonattainment provisions of the Act to offset longer attainment time frames with more stringent control

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<sup>32</sup> *Id.*

<sup>33</sup> 76 FR 69896 (November 9, 2011) (final rule approving most elements of 2008 PM<sub>2.5</sub> Plan).

requirements, the EPA interprets the MSM provision to assure that additional controls that can feasibly be implemented in the area beyond the set of measures adopted as BACM are implemented. Two ways to do this are (1) to require that more sources and source categories be subject to MSM analysis than to BACM analysis and controlled as necessary – *i.e.*, by expanding the applicability provisions in the MSM control requirements to cover more sources, and (2) to require reanalysis of any measures adopted in other areas that were rejected during the BACM analysis because they could not be implemented by the BACM implementation deadline to see if they are now feasible for the area given the longer attainment timeframe.<sup>34</sup> In this case, because CARB submitted both the BACM demonstration required under CAA section 189(b)(1)(B) and the MSM demonstration required under CAA section 188(e) simultaneously, we compared the BACM and MSM analyses in the 2015 PM<sub>2.5</sub> Plan with the previous RACM analysis carried out by the District to support the 2008 PM<sub>2.5</sub> Plan.

The 2015 PM<sub>2.5</sub> Plan identifies four District control measures not included in the RACM control strategy that the EPA approved as part of the 2008 PM<sub>2.5</sub> Plan.<sup>35</sup> Collectively, these four District measures are projected to achieve a total of 0.0357 tpd of NO<sub>x</sub> emission reductions and 3.3 tpd of direct PM<sub>2.5</sub> emission reductions by 2018 and to achieve a total of 0.4011 tpd of NO<sub>x</sub> emission reductions and 2.0 tpd of direct PM<sub>2.5</sub> emission reductions by 2020.<sup>36</sup> The MSM evaluation in the 2015 PM<sub>2.5</sub> Plan provides little discussion of actions to either expand the applicability provisions in the RACM control measures to cover more sources, or to reanalyze

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<sup>34</sup> 81 FR 6936, 6941 (February 9, 2016); *see also* EPA, Final Rule, “Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements,” 81 FR 58010, 58096-58097 (August 24, 2016).

<sup>35</sup> 81 FR at 6973-6975 (February 9, 2016). The four District control measures are: (1) Rule 4308 (“Boilers, Steam Generators, and Process Heaters 0.075 to <2 MMBtu/hr”), as amended November 14, 2013; (2) an enforceable commitment to amend Rule 4692 (“Commercial Charbroiling”) in 2016 to add requirements for under-fired charbroilers; (3) Rule 4901 (“Wood Burning Fireplaces and Wood Burning Heaters”), as amended September 18, 2014; and (4) Rule 4905 (“Natural Gas-Fired, Fan-Type Residential Central Furnaces”), as amended January 22, 2015.

<sup>36</sup> *Id.* at 6975, Table 9.

measures that were rejected during the previous RACM analysis to see if they are now feasible for the area given the longer attainment timeframe (*i.e.*, the extended attainment dates requested by the State). While the Plan provides the District's conclusions that its existing SIP control measures satisfy BACM and MSM requirements and that no additional control measures are feasible, it provides limited technical support for these conclusions.<sup>37</sup> We note that many of the SJVUAPCD rules that the 2015 PM<sub>2.5</sub> Plan relies on to address the MSM requirement have not been revised in many years<sup>38</sup> and that the State and District should conduct a more comprehensive evaluation of potential measures to strengthen these regulations, subject to notice-and-comment rulemaking, to ensure expeditious attainment of the 1997 PM<sub>2.5</sub> NAAQS in the SJV.

In light of the deficiencies in the MSM analyses, we find that the State and District have not demonstrated to the EPA's satisfaction that the 2015 PM<sub>2.5</sub> Plan includes the most stringent measures that are included in the implementation plan of any state or are achieved in practice in any state, and can feasibly be implemented in the area, in accordance with the requirements of CAA section 188(e). For these reasons, the EPA is denying CARB's request for extension of the December 31, 2015 Serious area attainment date under CAA section 188(e) for the 1997 PM<sub>2.5</sub> NAAQS in the SJV.

We note that the EPA had proposed to grant the State's requested extension of the Serious area attainment date in the SJV for the reasons explained in our February 9, 2016 proposed action on the 2015 PM<sub>2.5</sub> Plan. Public comments on our proposal, however, presented information indicating that our proposal to grant the requested extension would not be consistent

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<sup>37</sup> See generally 2015 PM<sub>2.5</sub> Plan, Appendix C (BACM and MSM for Stationary and Area Sources).

<sup>38</sup> See, e.g., 2015 PM<sub>2.5</sub> Plan, Appendix C at pp. C-106 to C-114 (discussing SJVUAPCD Rule 4550, as adopted August 19, 2004); pp. C-194 to C-197 (discussing SJVUAPCD Rule 8061, as amended August 19, 2004); and pp. C-275 to C-278 (discussing SJVUAPCD Rule 4565, as adopted March 15, 2007).

with the requirements of the Act. Our proposal to grant the State's request for extension of the Serious area attainment date raised the question as to whether the 2015 PM<sub>2.5</sub> Plan satisfied the minimum criteria in CAA section 188(e) for such extensions. Implicit in any such proposal to grant an extension requested by a state is the possibility that the EPA may decide to deny the extension, after considering public comments. Because our February 9, 2016 proposed rule provided adequate notice of both the possibility that the EPA would grant the State's request for extension of the attainment date for the SJV and the possibility that the EPA would deny this request, we are not providing additional opportunity for comment before this final action takes effect.

The EPA is taking final action only to deny the State's requested extension of the attainment date for the 1997 PM<sub>2.5</sub> NAAQS in the SJV and is not finalizing its proposed actions on other elements of the 2015 PM<sub>2.5</sub> Plan at 81 FR 6936 (February 9, 2016) at this time. The EPA will take final action on the remaining portions of the submitted 2015 PM<sub>2.5</sub> Plan, as appropriate, in a subsequent rulemaking.

### **III. Statutory and Executive Order Reviews**

Additional information about these statutes and Executive Orders can be found at <http://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

#### *A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

#### *B. Paperwork Reduction Act (PRA)*



This action does not impose an information collection burden under the PRA because this action does not impose additional requirements beyond those imposed by state law.

*C. Regulatory Flexibility Act (RFA)*

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities beyond those imposed by state law.

*D. Unfunded Mandates Reform Act (UMRA)*

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action does not impose additional requirements beyond those imposed by state law. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, will result from this action.

*E. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

*F. Executive Order 13175: Coordination With Indian Tribal Governments*

This action does not have tribal implications, as specified in Executive Order 13175, because the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction, and will not

impose substantial direct costs on tribal governments or preempt tribal law. Thus, Executive Order 13175 does not apply to this action.

*G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2–202 of the Executive Order. This action is not subject to Executive Order 13045 because it does not impose additional requirements beyond those imposed by state law.

*H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use*

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

*I. National Technology Transfer and Advancement Act (NTTAA)*

Section 12(d) of the NTTAA directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. The EPA believes that this action is not subject to the requirements of section 12(d) of the NTTAA because application of those requirements would be inconsistent with the CAA.

*J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Population*

The EPA lacks the discretionary authority to address environmental justice in this rulemaking.

*K. Congressional Review Act (CRA)*

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

*L. Petitions for Judicial Review*

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Ammonia, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide.

Dated: September 23, 2016.

Alexis Strauss,  
Acting Regional Administrator,  
EPA Region 9.

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